

Brachypterous Earwigs. A Problem for Field Workers.

By MALCOLM BURR, D.Sc., F.E.S.

A short time ago Mr. E. E. Green sent me a few earwigs which he had taken under boulders at Kyrenia in Cyprus. They were *Forficula lurida*, Fisch., and the sight of them recalled old memories, more particularly of one nice problem still waiting to be solved, which I will put forward now once more, in the hope that entomologists in the field may solve it during the summer. I called attention to the point in the *Ent. Mo. Mag.* twenty-five years ago, but without result.

The common earwig, *F. auricularia*, L., has the pronotum rounded at the hinder angle, which is correlated with the development of wings. In brachypterous forms the pronotum is rectangular. The forceps of the male are broadened near the base and this dilated part ends in a strong tooth. It ranges all over Europe and Africa and half way across Asia.

In the Mediterranean area it is replaced by very closely related species in which the tooth at the end of the dilated part of the male forceps is absent. This seems but a trifling feature, yet is very constant, and I have never known this tooth absent from any other area. It really does seem to be a permanent specific character. In the eastern portion of the Mediterranean, the species is normally fully winged; this is *F. lurida*, the species sent me from Cyprus by Mr. Green. In the western half, it is normally brachypterous, and is then known as *F. decipiens*, Gén . This form reaches the Levant, though the *lurida* form seems dominant there.

Now in Calabria there is another form, brachypterous like *F. decipiens*, but with a marked tooth on the forceps, like *F. auricularia*. In fact, it differs from *F. auricularia* only in having the wings shortened with the pronotum more square, and the hinder border of the elytra rounded, both features correlative with the shortening of the wings. It is in fact, to my mind, not a distinct species but a brachypterous *F. auricularia*, just as *F. decipiens* is a brachypterous *F. lurida*. As in the true Orthoptera and many Rynchota, brachypterous and macrop-terous forms of a single species are by no means rare.

Now we are coming to the point. In 1903, collecting on the south coast of the Isle of Wight, I casually turned over a cowpat. In channels in it I caught sight of two earwigs. There was something odd about their appearance that made me look a second time. They were brachypterous! To my mind that cowpat became classical. It stimulated me into quotation, as Mr. Donisthorpe may remember,

“Thou odoriferous stench! Sound rottenness!”

King John, Act III. Scene 4.

They were nothing like *F. lesnei*, common enough along the south coast, which is normally if not always brachypterous, but indistinguishable from the common or garden earwig, *F. auricularia*, a brachypterous form of which had not hitherto been recorded.

Now comes the fly in the ointment. They were both females. That means, that there were no means of saying whether they are *F. decipiens*, hitherto regarded as a purely Mediterranean form, or brachypterous specimens of true *F. auricularia*. I hunted in vain, but did not find a brachypterous male.

It seems very probable that they were brachypterous *F. auricularia*, and perhaps their own brothers and sisters were as macropterous as any normal earwig, but it is very desirable that the male be found.

It is a strange thing that the only ones recorded previously were from Calabria, to which two specific names have been given, *F. targionii*, Br., and *F. silana*, Costa, neither of which can stand, in my opinion, as they are nothing more or less than brachypterous specimens of *F. auricularia*. Brachypterism in this common and abundant species, therefore, is so very rare that it has been recorded only in these instances.

Everybody knows where earwigs are to be found, so I hope all friends in the field, especially Coleopterists, will have a second look at any earwigs they may see, and save them if they come across any brachypterous specimens.

A Holiday at Braemar.

By E. A. COCKAYNE, D.M., F.R.C.P.

I decided to spend my holiday in 1931 at Braemar to try to find the larvae of some species I have not yet seen, especially that of *Zyggaena exulans*. Mr. Russell James very kindly marked my maps for me and gave me many useful hints derived from his experiences in 1911 and 1912. I arrived on June 3rd, and found that there had been a heavy fall of snow on the hills during the night and there was another on June 6th, which covered the *exulans* ground. During the first part of my stay clouds enveloped the hill tops almost continuously and the weather was cold as well as wet, so that I had only one opportunity of looking for larvae of *exulans* and that was a failure. On June 16th however I found a few young larvae before I was caught in a heavy thunderstorm and on the next day saw about eighty larvae and a few cocoons, and two full grown larvae. I was unlucky because in several of the cocoons there were larvae, which had not pupated. Later I climbed the mountain three or four times and found more larvae and cocoons, and as very little has been written about the habits of the insect in its early stages in Scotland I will give a general account of my observations. The larvae seen were, I think, in four different instars; two in the last were a rich velvety black with rather large yellow lateral spots; the great majority were about half the size of the full grown ones, with a uniform ground colour of a less intense black and with a lateral row of smaller yellow spots, but if one may judge by the size of their heads two instars were represented amongst them.

A number of much smaller larvae were found, 6mm. long, and the ground colour of these was greyish green, the green tint being due to the green fat under the skin. On each somite above and in front of the yellow lateral spot was a smaller black spot. In a blown larva it can be seen that this black spot is still present even in the last instar, but in the living larva the blackness of the ground colour hides it. A few larvae still smaller, 3.5 to 4mm. long, were found, and in these